CPWR
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Data Bulletin

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Chronic Health Conditions among Construction Workers

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OVERVIEW

Construction workers face a variety of exposures and hazards—such as chemicals, dust, falls, and fumes—that can lead to *chronic health conditions*, including higher cardiovascular risks, *asthma*, and cancer. In addition, repetitive motions and awkward positions can lead to *musculoskeletal disorders* (MSDs), chronic pain, and other long-lasting injuries. Because chronic conditions can affect mental health, it is particularly important to address them with construction workers, who have higher than average rates of suicide and overdoses and can face depression and anxiety. Recognizing and addressing chronic conditions is key to maintaining a safe, healthy workforce and supporting construction workers' overall well-being.

This Data Bulletin examines chronic health conditions among U.S. construction workers including high blood pressure, *heart conditions*, stroke, cancer, hearing ability, arthritis, chronic pain, MSDs, anxiety, depression, and leading *causes of death*. Data on chronic health conditions come from the 2020-21 and 2023-24 National Health Interview Survey (NHIS), downloaded through IPUMS, and the 2022 Health and Retirement Study (HRS), which covers only respondents aged 51 years and older. Nonfatal MSD injuries resulting in *days away from work* (DAFW) data come from the U.S. Bureau of Labor Statistics (BLS) Survey of Occupational Injuries and Illnesses (SOII), while fatality data come from the National Center for Health Statistics (NCHS) Multiple Cause Mortality file. Data to calculate nonfatal injury rates were obtained from the 2011-2024 U.S. BLS Current Population Survey (CPS), downloaded through IPUMS. Nonfatal injury rates were calculated per 10,000 *full-time equivalents* (FTEs).

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THIS ISSUE

This issue examines chronic health conditions among U.S. construction workers, such as high blood pressure, heart conditions, stroke, cancer, chronic pain, and anxiety/depression.

KEY FINDINGS

In 2022, construction workers 51 years or older had a similar rate of high blood pressure (59.4%) as workers overall in that age group, but had lower rates of diabetes (20.0% vs 26.5%) and high cholesterol (17.9% vs 30.8%).
Chart 1

The proportion of workers 51 or older who reported a cancer diagnosis (excluding minor skin cancer) was slightly higher in all industries than in construction (16.8% versus 15.6%).
Chart 4

In 2023, one in five construction workers reported pain every day (11.0%) or most days (9.0%) in the past three months.
Charts 7

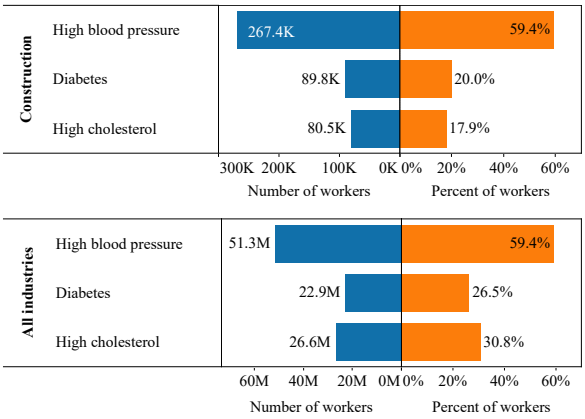
From 2011 to 2024, the number of musculoskeletal disorders resulting in days away from work for construction workers decreased 29.0% (42.1 thousand (K) to 29.9K) while the rate decreased 51.3%.
Chart 8

NEXT DATA BULLETIN

Caught-in/between injuries in Construction

To begin, chronic health conditions were evaluated among workers 51 years and older (subsequently referred to as "older workers"; Chart 1). In 2022, nearly 60% (59.4%) of older workers in construction reported that a doctor had at some point diagnosed them with high blood pressure, similar to the rate of workers overall. Older workers overall were more likely than construction alone to report ever being diagnosed with diabetes (26.5% versus 20.0%) or high cholesterol (30.8% versus 17.9%).

1. High blood pressure, high cholesterol, and diabetes, by industry (2022)



Source: *Health and Retirement Study, RAND HRS 2022 HRS core public use dataset.*

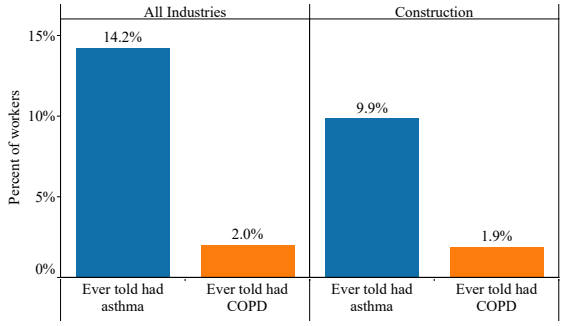
Heart conditions and stroke were then examined among older workers (Chart 2). In 2022, heart conditions were 8.7 times more common (25.1% versus 2.9%) and stroke was 4.3 times more common (6.9% versus 1.6%) in all industries than in construction.

2. Heart condition and stroke, by industry (2022)

Source: *Health and Retirement Study, RAND HRS 2022 HRS core public use dataset.*

During the 2020-2024 period, the percentage of all construction workers who were told they ever had asthma was 9.9%, compared to 14.2% of workers across all industries (Chart 3). Of workers who had asthma at some point in their lives, 41.3% (data not shown) of construction workers reported they still had asthma during this period, compared to over half (54.5%) of workers across all industries. The percentage of construction workers diagnosed by a medical professional as ever having COPD (including emphysema and chronic bronchitis) was 1.9%, approximately the same as workers overall.

3. Percent of workers who were ever told they had asthma or COPD, by industry (2020-2024*)

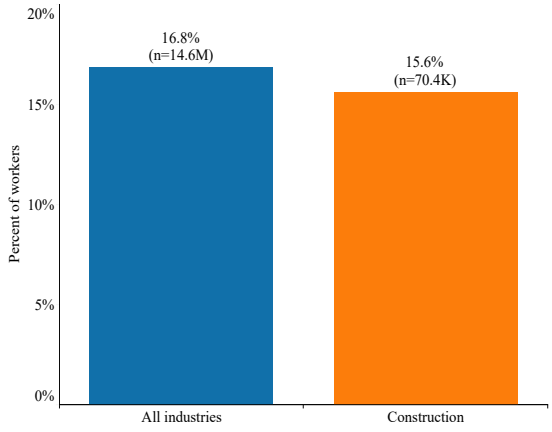


Source: *IPUMS, 2020-2024 National Health Interview Survey.*

**2022 unavailable due to lack of industry-specific data during collection.*

The proportion of older workers in 2022 reporting a cancer diagnosis (excluding minor skin cancer) was 1.1 times higher in all industries than in construction (16.8% versus 15.6%; Chart 4).

4. Reported history of cancer ever*, by industry (2022)



Source: *Health and Retirement Study, RAND HRS 2022 HRS core public use dataset.*

**Excludes minor skin cancer.*

Hearing status was examined among older workers through a self-reported assessment (Chart 5). In 2022, construction workers were less likely to report excellent to very good hearing than those in all industries (28.8% versus 46.5%). While no construction workers self-reported poor hearing, 4.0% of workers in all industries did, and they were 2.1 times more likely to report fair hearing than those in all industries. Hearing status is particularly important because of its connection to overall well-being: studies from the *Building Trades National Medical Screening Program (BTMed)* have found hearing loss is associated with increased mortality.

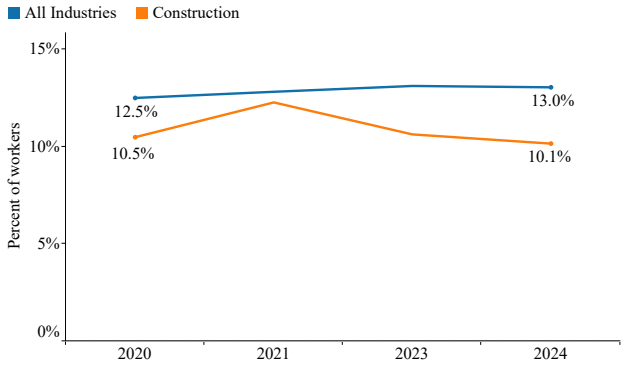
5. Self-rated hearing, by industry (2022)

Source: *Health and Retirement Study, RAND HRS 2022 HRS core public use dataset.*

**There were no self-reported hearing responses that fell into the Poor category in construction.*

From 2020 to 2024, the percentage of construction workers with some form of arthritis, such as rheumatoid arthritis, gout, lupus, and fibromyalgia, decreased 3.8% (10.5% to 10.1%; Chart 6), whereas the share among workers across all industries increased 4.0% (12.5% to 13.0%).

6. Percent of workers with some type of arthritis*, by industry (2020-2024^)



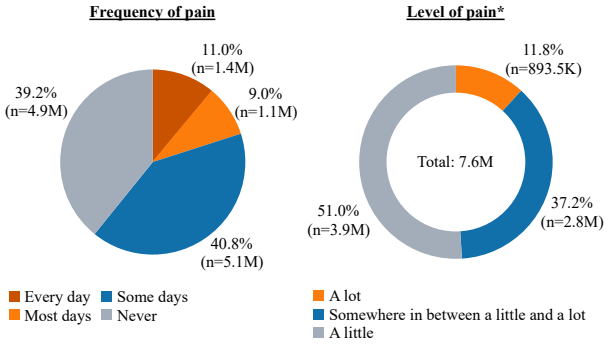
Source: *IPUMS, 2020-2024 National Health Interview Survey.*

**Includes rheumatoid arthritis, gout, lupus, and fibromyalgia.*

^2022 unavailable due to lack of industry-specific data during collection.

Chronic pain is a common issue among construction workers. In 2023, one in five (20.0%; Chart 7) experienced pain every day or most days over the past 3 months. Among workers experiencing any pain, 11.8% were in a lot of pain, while over half (51.0%) had a little.

7. Number and percent of construction workers dealing with chronic pain last three months (2023)

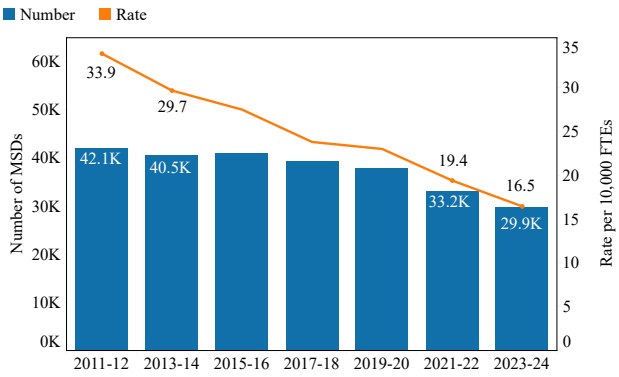


Source: *IPUMS, 2023 National Health Interview Survey.*

**Includes all respondents who reported having pain every day, most days, or some days.*

From 2011 to 2024, the number of MSDs resulting in DAFW in private construction decreased 29.0% (42.1K to 29.9K; Chart 8) while the rate decreased 51.3% (33.9 to 16.5 per 10,000 FTEs). These declines continue a downward trend seen in prior work on the number of MSDs.

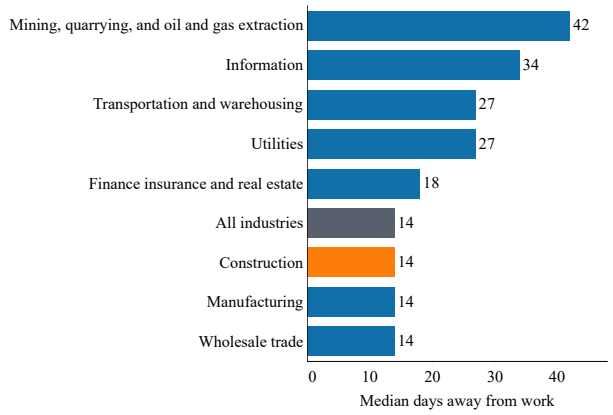
8. MSDs in construction (2011-2024; private industry)



Source: *U.S. Bureau of Labor Statistics, 2011-2024 Survey of Occupational Injuries and Illnesses and 2011-2024 IPUMS Current Population Survey.*

Next, median days away from work due to MSDs were examined by selected private industries for 2023-2024 (Chart 9). Mining, quarrying, and oil and gas extraction had the highest median days away from work (42), which was three times higher than the median for construction (14). That figure was similar to the number for all industries, manufacturing, and wholesale trade.

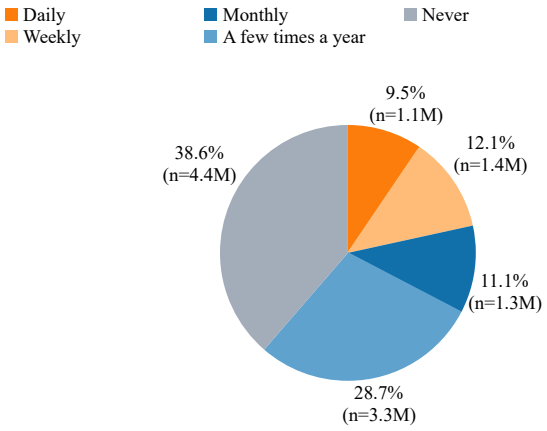
9. Median days away from work due to MSDs, by selected major industries (2023-2024; private industry)



Source: *U.S. Bureau of Labor Statistics, 2023-2024 Survey of Occupational Injuries and Illnesses.*

From 2020 to 2024, there was an increase in the percentage of construction workers suffering from anxiety or depression. In 2024, nearly a third of construction workers (32.7%; Chart 10) experienced feelings of anxiety at least monthly, with 9.5% having these feelings daily. Among workers who had feelings of anxiety or took anxiety medication, 10.5% rated the intensity of those feelings high, and of those who had feelings of anxiety at least a few times a year, 53.1% also had feelings of depression at least a few times a year (data not shown).

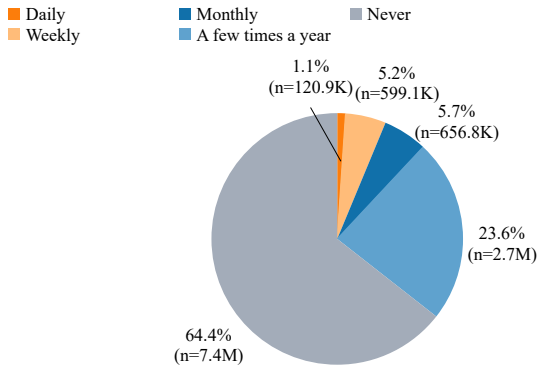
10. Frequency of feelings of anxiety among construction workers (2024)



Source: *IPUMS, 2024 National Health Interview Survey.*

In 2024, one in ten construction workers (12.0%; Chart 11) had feelings of depression at least monthly, with 1.1% experiencing them daily. More than half of workers (64.4%) never had feelings of depression. Of the workers who had feelings of depression or took depression medication, 12.9% characterized the intensity of these feelings as high (data not shown). Overall, 10.3% of workers reported having both anxiety and depression (data not shown).

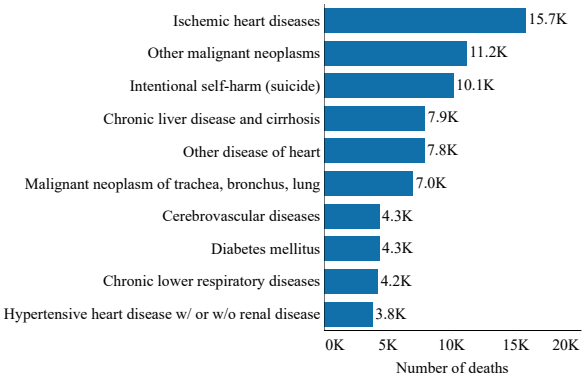
11. Frequency of feelings of depression among construction workers (2024)



Source: *IPUMS, 2024 National Health Interview Survey.*

Leading causes of death among construction workers aged 16-64 were analyzed from 2023 to 2024 using the *Cause of Death Recode 39* (Chart 12). *Ischemic heart diseases* were the most common cause of death, accounting for 15.7K deaths, followed by other *malignant neoplasms* (11.2K), and intentional self-harm (10.1K). Chronic liver disease and cirrhosis was the fourth most common cause of death (7.9K), while malignant neoplasms of trachea, bronchus, and lung were the sixth most common cause (7.0K). In comparison, the leading non-accident causes of death for the entire U.S. population are 1) heart disease, 2) cancer, 3) cerebrovascular diseases (e.g., stroke), 4) chronic lower respiratory diseases, and 5) Alzheimer's disease.

12. Leading causes* of death among construction workers 16-64 years old (2023-2024)



Source: *National Center for Health Statistics, 2023-2024 Mortality Multiple Cause File.*
**Excludes accidental deaths, homicides, and all other residual diseases.*

Among construction workers, some chronic illnesses, such as high cholesterol and diabetes, were less prevalent than in all industries, while others, such as high blood pressure and cancer, were similar to the prevalence in all industries. Construction workers reported lower hearing ability than those in all industries, which is of particular concern because prior work has established associations between hearing loss and 1) higher morbidity and mortality and 2) dementia.

Both the number and rate of MSDs resulting in DAFW for construction workers have continued to decline. One in five construction workers also reported chronic pain either daily or on most days. Pain is associated with opioid use among construction workers and is of great concern due to the disproportionately high overdose death rate in the industry. In addition, one in ten construction workers experience feelings of depression monthly and one in five experience anxiety weekly, both of which need to be monitored, as the industry has one of the highest suicide rates.

CPWR provides materials and resources that aid in preventing injuries and exposures that can lead to chronic illnesses, as well as resources for aging workers, hearing loss, and mental health and addiction. BTMed publishes significant research on chronic health conditions and mortality impacting construction workers, such as cancers and hearing loss. CPWR's Update (newsletter) often provides updates on interventions for preventing construction injuries and exposures, and the REASON newsletter shares solutions, research, resources, and positive steps being taken to prevent suicides and deaths from opioids. More information on health risk factors can be found on CPWR's Health Risk Factor Construction Chart Book Data Dashboard. OSHA and NIOSH also include materials to address health risk factors, exposures, and injuries among construction workers. Detailed resources include information on suicide prevention and preventing hearing loss.

ACCESS THE CHARTS & MORE

View the charts in PowerPoint and the data underlying the charts in Excel. Downloading will start when you click on each link. These files can also be found under the Data Bulletin at: https://www.cpwr.com/research/data-center/data-reports/.

DEFINITIONS

- ***Asthma*** *– A chronic respiratory disease that impairs breathing, resulting in wheezing, breathlessness, and chest tightness. For more information: cdc.gov/asthma/about/index.html.*
- ***Building Trades National Medical Screening Program (BTMed)*** *– Program that provides free medical screening exams to construction workers formerly employed at Department of Energy (DOE) nuclear weapons research and production sites. For more information: btmed.org/.*
- ***Causes of death*** *– The specific condition that caused the death based on the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis Code.*
    - ***Cause of Death Recode 39*** *– Common grouping of ICD-10 CM codes into 39 cause of death categories. For more information: The 2024 Documentation Initial Release Mortality Multiple Cause-of Death Public Use Record.*
- ***Chronic health conditions*** *– Illnesses or injuries that require ongoing medical care.*
- ***Chronic obstructive pulmonary disease (COPD)*** *– A group of lung diseases that prevent airflow to the lungs, including emphysema and chronic bronchitis. For more information: cdc.gov/copd/about/index.html.*
- ***Days away from work (DAFW)*** *– Nonfatal injury cases resulting in at least one day away from work beyond the day of injury or illness onset.*
- ***Full-time equivalent worker (FTE)*** *– Determined by the hours worked per employee on a full-time basis, defined as working 2,000 hours (40 hours x 50 weeks) per year.*
- ***Heart Condition*** *– Any heart disease.*
    - ***Health and Retirement Study*** *– Indicates if ever diagnosed by a doctor or health professional with a heart attack, coronary heart disease, angina, heart failure, atrial fibrillation, or other heart problem.*
- ***Ischemic heart diseases*** *– Heart damage caused by narrowed heart arteries, also called coronary artery disease and coronary heart disease.*
- ***Malignant neoplasm*** *– Cancerous tumors that can spread into, or invade, nearby tissues.*
- ***Musculoskeletal disorders*** *– Injuries and/or pain that occur in joints, ligaments, muscles, nerves, tendons, and other areas of the limbs, neck or back.*
    - ***Survey of Occupational Injuries and Illnesses*** *– Include cases where the nature of the injury or illness is pinched nerve; herniated disc; meniscus tear; sprains, strains, tears; hernia (traumatic and nontraumatic); pain, swelling, and numbness; carpal or tarsal tunnel syndrome; Raynaud's syndrome or phenomenon; musculoskeletal system and connective tissue diseases and disorders, when the event or exposure leading to the injury or illness is overexertion and bodily reaction, unspecified; overexertion involving outside sources; repetitive motion involving microtasks; other and multiple exertions or bodily reactions; and rubbed, abraded, or jarred by vibration.*

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  https://covid.elcosh.org/index.php
- Electronic Library of Construction Occupational Safety and Health
  https://www.elcosh.org/index.php
- eLCOSH Nano
  https://nano.elcosh.org/
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  https://ecd.cpwrconstructionsolutions.org/
- Nano Safety Data Sheet Improvement Tool
  https://nanosds.elcosh.org/
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